

STATUS OF THE CLAIMS

Claims 12, 14 and 17 have been objected to for informalities.

Claim 12 is rejected under 35 U.S.C. § 112 for indefiniteness.

Claims 1-11, 13-17, and 21-22 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Sajic, et al. (US 6,017,860).

Claims 1-4, 7-8, 10-11, 15, and 18-19 have been rejected under 35 U.S.C. § 102(b) as being anticipated by JP 11-236310.

Claims 5, 6, and 9 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 11-236310.

Claims 1-22 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 11-236310 in view of Sajic, et al. (US 6,017,860).

Claims 12, 14, and 17 have been amended. A marked-up copy of the claims as amended may be found in Appendix A.

Claims 23-28 have been added.

Claims 1-28 are presented for reconsideration. A clean copy of the pending claims may be found in Appendix B.

REMARKS

Claims 12, 14 and 17 have been objected to for informalities. Claims 12, 14, and 17 have been amended to remedy these informalities. No new matter has been added.

Claim 12 has been rejected under 35 U.S.C. § 112 for indefiniteness for improper dependency, which has been corrected. Claim 12 has also been rejected for indefiniteness due to the relative term "NTU". Applicants respectfully traverse. The specification at page 20 (Example 6) discloses that clarity of hair gels is measured by using Hach Laboratory Turbidimeter (Model 2100N) which is designed for measurement of turbidity from 0 to 4000NTU (Nephelometric Turbidity Units). This is a standard test used in the art of hair gels for measuring turbidity. Thus, in light of the specification, one skilled in

the art would be reasonably apprised of the scope of the invention. Claim 12 has been amended to specify the meaning of NTU.

Claim 23 has been added to a surfactant-free mousse. Descriptive basis may be found in Example 8 as filed.

Claims 24-28 have been added. These claims have descriptive basis in claims 1 and 10-12 as filed, new claim 23, and the specification which states "xanthan gum alone provides fixative properties".

Claims 1-11, 13-17, and 21-22 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Sajic, et al. (US 6,017,860). Sajic discloses a 3-in-1 shampoo; that is, a shampoo intended to wash, condition, and style hair. Such composition may optionally contain xanthan gum as a swellable polymeric thickening agent. See column 6, lines 47-53. Thus, the xanthan gum is added as a thickener for the shampoo, not as a hair fixative as in the current application.

This difference is emphasized by the mechanism of the shampoo and the examples. Starting at page 6, line 56, the shampoo mechanism is described in which it is stated that upon solubilization of the shampoo, the viscosity decreases (as the xanthan gum is water soluble, it washes away), releasing the surfactant monomers and anionic styling polymer to form a styling/conditioning polymer which adheres/attracts to the hair.

That the xanthan gum is washed away is also evidenced by the examples which do not contain "styling polymers," but contain xanthan have very poor styling. For example, formulation 17 contains 1.0% xanthan, but no "styling polymer" and has "very poor" styling properties. In comparison, comparative formulations 18-20 have good to excellent styling properties.

Thus, Sanjic does not provide a fixative effective amount of xanthan to the hair and the rejection has been overcome.

Claims 1-4, 7-8, 10-11, 15, and 18-19 have been rejected under 35 U.S.C. § 102(b) as being anticipated by JP 11-236310. JP 11-236310 discloses using specific heat-treated xanthan gums to provide cosmetics with excellent stability and feel (ie. non-greasy, non-sticky). The application does

not disclose the use of heat-treated xanthan gums in hair fixative compositions nor discloses that such xanthan would provide the fixative properties, including curl retention, claimed by the present invention.

The Examiner states that JP 11-236310 discloses a gel or cream composition. Applicants agree. However, neither the gel nor the cream disclosed by the reference are hair fixative gels or creams, but skin creams as evidenced at page 11 which states "skin cosmetics, such as ... creams" and Example 3, a skin cream as obviated by the ingredients.

Thus, it is clear that JP 11-236310 does not teach the use of xanthan gum in a hair fixative composition.

Claims 5, 6, and 9 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 11-236310. As detailed above, this reference does not teach or suggest the use of xanthan gum in a hair fixative composition and the rejection has been overcome. Applicants neither admit nor deny the Examiner's statements.

Claims 1-22 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 11-236310 in view of Sajic, et al. (US 6,017,860). As detailed above, Sajic does not teach a composition which, in its intended mode of use, contains a hair fixative amount of xanthan gum. Further, JP 11-236310 neither teaches nor suggests the use of xanthan gum in a hair fixative composition.

The Examiner states that Sajic teaches turbidity of the examples. However, it should be noted that no objective measurements are given of any of the formulations. Although Sajic teaches that the formulations have curl retention and styling effects, it does not teach the presently claimed formulation, nor does it compare the formulations with and without xanthan gum to show that the xanthan gum is present in a fixative effective amount.

Applicants disagree that one skilled in the art would be motivated to use the xanthan gum and second polymer of Sajic in the formulation of JP 11-236210 as the skilled artisan would not add a hair fixative to a skin cream or other non-fixative hair formulation. Further, increasing the viscosity of a

composition does not necessarily provide more rigid support of the hair as stated by the Examiner.

In view of the foregoing, Applicant submits the Application is now in condition for allowance and respectfully requests early notice to that effect.

Respectfully submitted,



Karen G. Kaiser
Attorney for Applicants
Reg. No. 33,506

National Starch and Chemical Company
P.O. Box 6500
Bridgewater, NJ 08807-0500
(908) 575-6152

Dated: 13 May 02

Appendix A

(marked up copy of amended claims)

1. A hair cosmetic composition comprising a fixative effective amount of xanthan gum.
2. The composition of claim 1, wherein the xanthan gum has been heat treated at a
5 moisture content of less than about 25%, a temperature of at least about 60°C for at
least about 30 minutes.
3. The composition of claim 2, wherein the temperature is at least 100°C.
4. The composition of claim 3, wherein the temperature is at least 105°C.
5. The composition of claim 2, wherein the moisture content is less than about 8%.
- 10 6. The composition of claim 3, wherein the moisture content is less than about 1%.
7. The composition of claim 2, wherein the heat treatment is for at least about one hour.
8. The composition of claim 3, wherein the heat treatment is for at least about 2.5 hours.
9. The composition of claim 2, wherein the heat treatment is at a moisture of less than
about 1% and the temperature is at least about 105°C for at least about 2.5 hours.
- 15 10. The composition of claim 1, wherein the composition is selected from the group
consisting of a spray, a mousse, a hair lotion, a cream, a pomade, and a gel.
11. The composition of claim 10, wherein the composition is a gel.
12. The composition of claim 13 characterized by a viscosity of at least about 8000 cps, a
high humidity curl retention of at least about {80%} and a turbidity of no more than
20 about 100 NTU (Nephelometric Turbidity Units).
13. The composition of claim 1, further comprising a second fixative polymer.

14. The composition of claim 13 wherein the second fixative polymer is selected from the group ~~comprising~~ consisting of acrylates copolymer, octylacrylamide/acrylates/butylaminoethyl methacrylate copolymer, acrylates/octylacrylamide copolymer, VA/crotonates/vinyl Neodecanoate copolymer, 5 poly(N-vinyl acetamide), poly(N-vinyl formamide), polyurethane, corn starch modified, sodium polystyrene sulfonate, polyquaternium-4, polyquaternium-10 and polyurethane/acrylates copolymer.
15. The composition of claim 2, wherein the composition is a gel.
16. The composition of claim 16 further comprising a second fixative polymer.
- 10 17. The composition of claim 17 wherein the second fixative polymer is selected from the group ~~comprising~~ consisting of acrylates copolymer, octylacrylamide/acrylates/butylaminoethyl methacrylate copolymer, acrylates/octylacrylamide copolymer, VA/crotonates/vinyl Neodecanoate copolymer, poly(N-vinyl acetamide), poly(N-vinyl formamide), polyurethane, corn starch modified, 15 sodium polystyrene sulfonate, polyquaternium-4, polyquaternium-10 and polyurethane/acrylates copolymer.
18. A method of preparing the composition of claim 1, comprising dispersing the xanthan gum in water; and mixing in other hair cosmetic components.
19. A method of preparing the composition of claim 2, comprising dispersing the xanthan 20 gum in water; and mixing in other hair cosmetic components.
20. A method of preparing the composition of claim 17 comprising dispersing the xanthan gum in water; and mixing in other hair cosmetic components.
21. A method of providing fixative properties to the hair comprising applying the composition of claim 1.
- 25 22. A method of providing curl retention under high humidity conditions comprising applying the composition of claim 1.

23. The composition of claim 1, wherein the composition is a surfactant-free hair mousse.
24. A hair cosmetic composition, wherein the fixative consists essentially of a xanthan gum.
25. The composition of claim 24, wherein the composition is selected from the group consisting of a spray, a mousse, a hair lotion, a cream, a pomade, and a gel.
26. The composition of claim 25, wherein the composition is a gel.
27. The composition of claim 24 characterized by a viscosity of at least about 8000 cps, a high humidity curl retention of at least about 80% and a turbidity of no more than about 100 NTU (Nephelometric Turbidity Units).
28. The composition of claim 24, wherein the composition is a surfactant-free hair mousse.

Appendix B

(clean copy of pending claims)

1. A hair cosmetic composition comprising a fixative effective amount of xanthan gum.
2. The composition of claim 1, wherein the xanthan gum has been heat treated at a
5 moisture content of less than about 25%, a temperature of at least about 60°C for at
least about 30 minutes.
3. The composition of claim 2, wherein the temperature is at least 100°C.
4. The composition of claim 3, wherein the temperature is at least 105°C.
5. The composition of claim 2, wherein the moisture content is less than about 8%.
- 10 6. The composition of claim 3, wherein the moisture content is less than about 1%.
7. The composition of claim 2, wherein the heat treatment is for at least about one hour.
8. The composition of claim 3, wherein the heat treatment is for at least about 2.5 hours.
9. The composition of claim 2, wherein the heat treatment is at a moisture of less than
about 1% and the temperature is at least about 105°C for at least about 2.5 hours.
- 15 10. The composition of claim 1, wherein the composition is selected from the group
consisting of a spray, a mousse, a hair lotion, a cream, a pomade, and a gel.
11. The composition of claim 10, wherein the composition is a gel.
12. The composition of claim 1 characterized by a viscosity of at least about 8000 cps, a
high humidity curl retention of at least about 80% and a turbidity of no more than
20 about 100 NTU (Nephelometric Turbidity Units).
13. The composition of claim 1, further comprising a second fixative polymer.

14. The composition of claim 13 wherein the second fixative polymer is selected from the group consisting of acrylates copolymer, octylacrylamide/acrylates/butylaminoethyl methacrylate copolymer, acrylates/octylacrylamide copolymer, VA/crotonates/vinyl Neodecanoate copolymer, poly(N-vinyl acetamide), poly(N-vinyl formamide),
5 polyurethane, corn starch modified, sodium polystyrene sulfonate, polyquaternium-4, polyquaternium-10 and polyurethane/acrylates copolymer.
15. The composition of claim 2, wherein the composition is a gel.
16. The composition of claim 16 further comprising a second fixative polymer.
17. The composition of claim 17 wherein the second fixative polymer is selected from the
10 group consisting of acrylates copolymer, octylacrylamide/acrylates/butylaminoethyl methacrylate copolymer, acrylates/octylacrylamide copolymer, VA/crotonates/vinyl Neodecanoate copolymer, poly(N-vinyl acetamide), poly(N-vinyl formamide), polyurethane, corn starch modified, sodium polystyrene sulfonate, polyquaternium-4, polyquaternium-10 and polyurethane/acrylates copolymer.
18. A method of preparing the composition of claim 1, comprising dispersing the xanthan
15 gum in water; and mixing in other hair cosmetic components.
19. A method of preparing the composition of claim 2, comprising dispersing the xanthan gum in water; and mixing in other hair cosmetic components.
20. A method of preparing the composition of claim 17 comprising dispersing the xanthan
20 gum in water; and mixing in other hair cosmetic components.
21. A method of providing fixative properties to the hair comprising applying the composition of claim 1.
22. A method of providing curl retention under high humidity conditions comprising applying the composition of claim 1.
23. The composition of claim 1, wherein the composition is a surfactant-free hair mousse.
25
24. A hair cosmetic composition, wherein the fixative consists essentially of a xanthan

gum.

25. The composition of claim 24, wherein the composition is selected from the group consisting of a spray, a mousse, a hair lotion, a cream, a pomade, and a gel.

26. The composition of claim 25, wherein the composition is a gel.

5 27. The composition of claim 24 characterized by a viscosity of at least about 8000 cps, a high humidity curl retention of at least about 80% and a turbidity of no more than about 100 NTU (Nephelometric Turbidity Units).

28. The composition of claim 24, wherein the composition is a surfactant-free hair mousse.